

PUBLIC ADMINISTRATION

SELECTION OF THE OPTIMUM MODEL OF MANAGEMENT IN WATER SUPPLY AND WASTEWATER SPHERE OF UKRAINE¹*DSc (public administration) Natalia Olijnyk*²*PhD (Law) Iryna Krylova**Ukraine, Kyiv, National Academy for Public Administration under the President of Ukraine*¹*Associate Professor, Professor of the Department of Economic Policy and Governance*²*Doctoral student*DOI: https://doi.org/10.31435/rsglobal_sr/30062019/6543**ARTICLE INFO****Received** 22 April 2019**Accepted** 18 June 2019**Published** 30 June 2019**KEYWORDS**water supply and wastewater sphere,
management,
state policy,
state regulation**ABSTRACT**

The article is devoted to the analysis of European models of water supply and wastewater management and their implementation in Ukraine. The authors review the classical models of EU water supply and water disposal management: English, French and German, their historical and political roots, the theoretical basis. In parallel, the authors analyze the state policy in the sphere of water supply and wastewater of Ukraine, the principles of its formation and features, the current state of the sphere of water supply and wastewater, organizational and legal forms of water supply and wastewater enterprises. The article analyzes the current state of realization of public-private partnership in the field of water supply and wastewater with indication of existing contracts and contracts that have become invalid. It is proved that the difference between the water supply and wastewater companies of different management models in Ukraine is not marked, as the general state of the water supply and wastewater sector shows the existence of common problems characteristic of all enterprises. In particular, the ineffectiveness of tariff policies, depreciation of fixed assets, low quality of services, difficult financial condition, inadequate investment, etc. The authors discuss the possibilities of adaptation of classical management models in Ukraine and possible consequences. The article defines the institutional problems of the state policy of Ukraine in the sphere of water supply and wastewater, which influence the efficiency of the implementation and functioning of any model of management and regulation.

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Introduction. The state policy of reforming the water supply and wastewater system of Ukraine since the 1990s (since independence) was formed under the influence of the models of management and regulation of the developed countries of the world. Decentralization, demonopolization, development of a competitive environment, improvement of the management system, provision of state regulation and control, public-private partnership, etc. [36; 39; 40; 37; 23]. At the same time, numerous reforms in the field of water supply and wastewater have not yet solved the problems of efficient functioning and development of the water supply and wastewater sector. The

systematic lack of investment, inefficient tariff regulation, poor quality of water supply and wastewater services lead to a disadvantage in the water supply and wastewater sector. The issue of efficient management and regulation of the water supply and wastewater sector, public-private partnership, and effective investment mechanisms do not lose their relevance. In this connection, it is advisable to analyze the experience of developed European countries in order to identify opportunities for the adaptation of European models in Ukrainian conditions.

Purpose of the study. The purpose of the paper is to analyze the possibility of adaptation of European models of water supply and wastewater management in Ukraine, to determine the correlation of institutions with the conditions of operation of an optimal management model for Ukraine.

Research results. National and regional water supply and wastewater systems of the EU countries were formed taking into account specific climatic, demographic and topographical situations and are the result of a certain cultural, political and social structure of the societies in which they are used. The classic division of management systems for water supply and wastewater companies is divided into three leading models of the countries of England and Wales, France and Germany.

The English (Anglo-Saxon) model is characterized by the complete privatization of the country's water management complex (private management) with thorough state regulation. An example of England and Wales is unique in that no other country in the world, apart from Chile and some cities in the United States, has privatized its entire water complex. The competitive segment is implemented for the production and distribution of water supply and wastewater services, while water supply networks (as monopoly segments) remain under the strict control of an independent state regulator - the Water Services Regulatory Authority (OFWAT) [17; 12].

The French model is characterized by contractual mechanisms of public-private partnership and market regulation, which involves the transfer of local authorities to the management of private companies communal property or powers. The French model comes from the old tradition of public-private partnership. The contract for the first delegation in the French water supply system dates back to 1856. The basic principles of this model are partnership, self-sustainability and organizational flexibility. They come from two legal constructions: legal acts regulating local communal services (normative activity of the state), and contract law, agreements regulating the relations between the responsible authority and the enterprise-executing services (legal practice and traditions). The classic type of public-private partnership contract is the "at your own risk" concession. Under such an agreement, the concessionaire entrusts the management concessionaire and the provision of the operation of the communal service at its own expense and at its own risk, in return for the provision of various rights and privileges, in particular the right to collect payments from consumers. Another type of contractual relationship is the lease of an enterprise, where only the renewal of fixed assets of enterprises is carried out. The third type of contracts is a management agreement with payment by results, when the operator is not entitled to collect payments from consumers, and receives funds from the local budget. Three possible models for the participation of private enterprises in the management of the water supply and wastewater sector are selected depending on the degree of subordination to the laws of the market: completely, partially or very limited [28, p. 23-26]. Approximately 21% of the population of France receives water from municipal producers, while 79% are served by one of the three largest French water operators: Veolia, Suez-Lyonnaise des Eaux and SAUR [1].

The German model is characterized by a high degree of participation of local authorities in the management of water supply and wastewater services. Municipalities create joint ventures with water supply and wastewater companies in the form of open joint-stock companies. In this case, the infrastructure of water supply is included in the authorized capital of open joint stock companies as a contribution of the municipality, which allows controlling the majority of shares. Among the many factors that can explain the choice of this model, the very nature of the German political institutions is leading. Germany is a federal state. As each of the 16 federal states has its own specific laws, the water sector is extremely fragmented, with thousands of small, local operators and many different ways of organizing. Consequently, in the national market, unlike the French or British model, there are no dominant large operators. About 30% of the population in Germany receives water supply from private operators, which is only about 9% of the total number of operating entities. For the most part, private operators are active in large cities and in the eastern part of Germany [1; 13; 26; 27].

Sufficiently empirical research is devoted to the analysis of water supply management and wastewater management models and analysis of the functioning of alternative municipal model

management. Part of these studies is devoted to the general question of the impact of the form of ownership of water supply and sewerage objects on the efficiency of the sphere's operation, while the other part studies the relationship between management models and tariffs for water supply and wastewater services, the other part - the link between the form of ownership and quality of services, the other part - the connection between the form of ownership and the efficiency of water use [10; 9; 14; 16; 7; 2; 8; 20, p.34]. The conclusions of these studies vary, but they all converge in one: the ownership itself does not affect the efficiency of the activities of water supply and wastewater companies. The question is whether the water supply and wastewater company will have enough opportunities and criteria (let's call them "institutions") for effective service delivery.

Empirical studies on the relationship between the form of ownership of the water supply and wastewater company, the model of management and the size of tariffs for water and wastewater services proved that privatization or increase of the share of private property sometimes leads to unreasonable growth of tariffs for services [4; 3; 5; 6; 11; 15]. The main conclusion of such studies is that the private sector's participation in the water supply and wastewater sector leads to an increase in tariffs for water supply and wastewater services.

On the other hand, UN reports on human development indicate that the conditions for the reform of communal services for each country may be different, but those utilities that operate within the framework of such a state policy that meets the basic requirements: independence and financial autonomy, which are Do not allow political interference with resources; Democracy and transparency of policies to ensure accountability; the separation of water supply and wastewater services from administrative services that oversee the management and define well-defined standards for water supply and wastewater services; adequate state funding to expand the water supply and wastewater system, along with the implementation of a national water supply strategy for all citizens [21].

The state policy in the sphere of water supply and wastewater of Ukraine over the past 10 years has been formed in the direction of creating the proper conditions for the development of public-private partnership and the introduction of state regulation in the field. The modern sphere of centralized water supply and wastewater of Ukraine is serviced by 2716 water supply and wastewater enterprises mainly of communal property (except in isolated cases where the ownership form is state, private or mixed), decentralized water supply and wastewater - enterprises of various ownership forms [30]. In addition, facilities for engineering infrastructure and urban amenities, including networks, facilities, equipment that are connected with the supply of water, gas, heat, as well as wastewater and sanitation treatment, can not be privatized [38].

The predominant form of management of enterprises of water supply and wastewater in Ukraine is direct communal management. The only enterprise of water supply and wastewater in Ukraine with a delegated municipal form of management, which according to some criteria corresponds to the German management model – private joint-stock company PRAT "AK Kyivvodokanal" privatized in 1999 according to the local program under the influence of the world tendency of privatization of the water sector 1990s AKV "Kyivvodokanal" holds 67% of the shares of the company belonging to the Private Joint Stock Company "Kyivenergoholding", 25% of shares - the municipal property department of Kyiv, the executive body of the Kyiv City Council (Kyiv city state administration), the remaining shares - to the shareholders of the members of the labor collective of the enterprise [25]. The company serves the capital of Ukraine with an actual number of 4 million people.

Directions of reformation of the water supply and wastewater economy of Ukraine in the late 1990s indicate that the French model of governance was considered as the most effective model for Ukraine, which allows the private sector to be involved in the communal economy while controlling the production of services for water supply and wastewater through the ownership of the infrastructure. However, the contractual mechanisms of public-private partnership in the sphere of water supply and wastewater of Ukraine are developing at a pace that was not expected at the time when the state policy was formed. Table 1 shows the lease / concession contracts of the water supply and sewerage industry in Ukraine, and Table 2 deals that were terminated for various reasons.

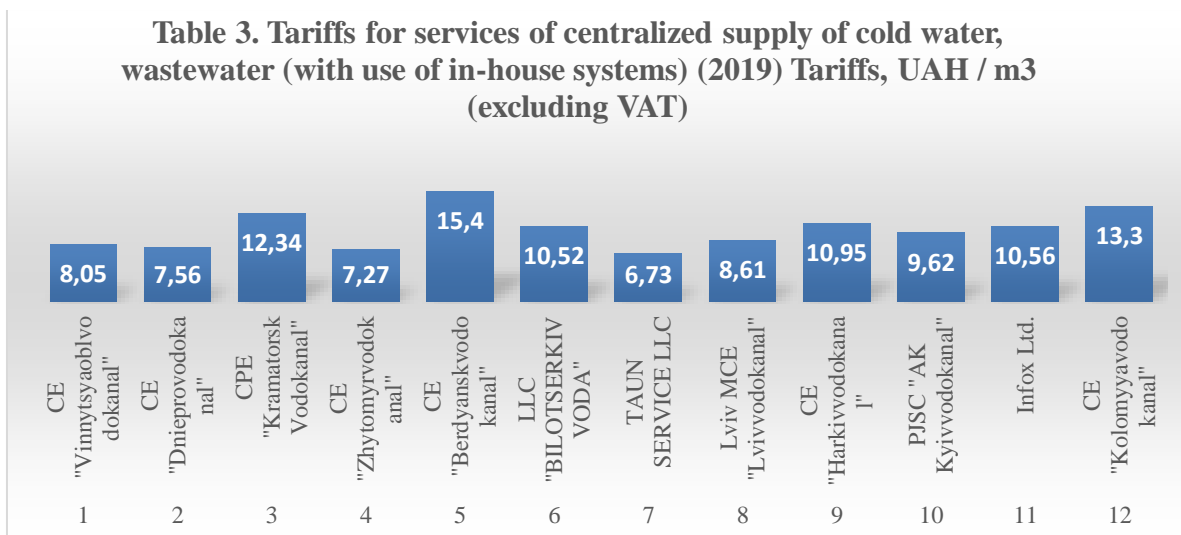
Table 1. Current lease / concession agreements of water supply and wastewater companies (made on the basis of [29; 31; 32; 33; 41]).

| City/town, population | Agreement description | Lease/concession term |
|---|--|-----------------------|
| Odesa Population - 1 013 292 people (as of 01.01.2019) | The integral property complex of communal enterprise Odesvodokanal was transferred from 01.01.2004 to LLC "Infox Ltd." (branch "Infoxvodokanal"). At the time of the lease, the state of constructions and equipment of the enterprise was close to the critical one: the depreciation of fixed assets amounted to 55%, water losses in water supply networks – 42%, arrears for the used electric power – 25 mln. | 49 years |
| Severodonetsk Population – 104 503 people (2018) | The integral property complex of the communal enterprise "Severodonetskvodokanal" in 2009 was transferred to the concession LLC "Town service" | 25 years |
| Bila Tserkva Population – 209 176 people (2018) | The integral property complex of the utility company "Bilotserkivvodokanal" in 2012 was transferred to the concession LLC "Belotserkivvoda". According to the concession contract, not all property complex was transferred to the concession, but only those objects connected with water supply and wastewater. The remaining property will continue to be serviced and maintained by the utility company "Belotserkvvodokanalom". | 15 years |

Table 2. Lease / Concession Agreements for Water Supply and Wastewater Companies, which were terminated for various reasons (drawn up on the basis of [34; 35; 19])

| Agreement | Description of the agreement and the grounds for its termination |
|---|---|
| Lease of utility company "KirovogradVodokanal" (2006 - 2008) | The integral property complex of the KirovogradVodokanal Utility Company was transferred to the Water Management Company in 2006 for lease for 49 years. The lease lasted 2 years, and in 2008 the Supreme Economic Court of Ukraine issued a resolution to terminate the lease agreement of the integral property complex KP "Kirovogudvodokanal" No. 42/17, concluded on March 23, 2007 between "Water Enterprise" Ltd. and the Property Management and Privatization of Communal Property of Kirovohrad City Council due to violation of the terms of the lease agreement. |
| Concession RME "Luhanskvoda" (2006-2012) | The integral property complex of the oblast utility company "Company" Luganskvoda "was transferred to the concession in 2006 by Luhansk Regional Council LLC "Luganskvoda "(the founder of which was the company" Rosvodokanal ") for a period of 25 years. RME "Luganskvoda" serviced 26 cities, 66 settlements and 81 villages, in which 1.6 million citizens lived and operated about 6 thousand enterprises. The concession agreement identified investment by the concessionaire in the amount of 756.7 million UAH and provided for the implementation of measures aimed at improving the water accounting system, updating the fleet of vehicles, reducing energy consumption and reducing excessive water losses. However, in 2012, the concession contract was terminated, the concessionaire's debt amounted to 90 million UAH |
| Concession of the State Communal Enterprise "Berdyansky City Water Distribution Channel" (2008-2011) | The integral property complex of the state utility company "Berdyansky City Water Supply" was transferred to the management under the contract of concession №1 dated December 11, 2008 LLC "Chista Voda-Berdyansk". However, in 2009, the Berdyansk City Council adopted a decision dated 29.10.2009 No. 2 "On Early Termination of a Concession Contract and Determination of the Contractor for Services for Water Supply and Wastewater Treatment in Berdyansk". Trial delays lasted until 2011. And the decision of the Supreme Economic Court of Ukraine was decided to terminate the concession agreement between the Berdyansk City Council and LLC "Clean Water - Berdyansk". |

It should be noted that there is no significant difference between water supply and wastewater enterprises of different management models in Ukraine, since the general state of the water supply and wastewater sector shows the existence of common problems characteristic of all enterprises. In particular, the ineffectiveness of tariff policies, depreciation of fixed assets, poor quality of services, difficult financial condition, inadequate volume of investments, etc. [30]. Table 3 shows the level of tariffs for centralized water supply services for sample enterprises of different forms of management, which shows the lack of a relationship between the form of ownership / form of management and tariff [42].



Two models of the countries of the world with market economy were taken into account when forming the model of state regulation of the water supply and wastewater system of Ukraine: the first, where regulatory functions were relied upon by a specially created regulatory authority (used in England, the Baltic States and South America: Argentina, Venezuela, Peru, Chile); the second when regulatory functions are assigned to the central executive authority and executive bodies of local self-government or specially created regional, local regulatory authorities (applicable in EU, CIS, Middle East) [18, p. 12-13]. By 2011, state regulation in the field of water supply and wastewater was based on the model of the second model, but with a national peculiarity. In particular, the state policy of regulation of activities of natural monopoly entities in the sphere of housing and communal services was implemented by the following authorized bodies of state power: the Antimonopoly Committee of Ukraine, the State Committee of Ukraine for Housing and Communal Services, the State Inspection for Price Control, the Council of Ministers of the Autonomous Republic of Crimea, local state administrations, executive bodies of village, settlement, city councils. The existing system of state regulation was not effective, since the powers of the regulatory bodies were not clearly demarcated, duplication of regulatory and supervisory functions of the authorities, coordination between the controlling bodies, etc., the mechanisms of state regulation, mainly focused on the regulation of pricing. Water supply and wastewater companies showed negative financial results, the quality of services deteriorated, as well as the deteriorating state of the industry as a whole, tariff policy was the subject of political speculation. Has not shown efficiency and tariff regulation of local self-government bodies. As a result of the reform of the water supply and wastewater sector, from 2011, state regulation of 74% of the water supply and wastewater market is carried out by an independent state regulatory body (NEURC), while the rest of the market is regulated by local authorities [24].

Conclusions. Taking into account the above, let's try to answer the question whether Ukraine's adaptation of classical water management and regulation models in the field of water supply and wastewater is possible. In particular, full privatization of the water management complex of Ukraine with thorough state regulation (like the English model, the state regulator is considered the best in the world). In our opinion, the introduction of such a model in its pure form in Ukrainian realities is impossible and will not have the same effect as at one time in England. The mechanisms of state regulation of the English model were developed on the basis of the theory of optimum, in a truly liberal tradition, and the theory of imperfect markets in the conditions of a monopoly. These theories were enriched with the experience of developed capitalism, in which to achieve the optimal result is

possible: the maximum introduction of competition, the development of clear short-term contracts, the formation of controlling bodies [28, p. 38-39]. The peculiarities of the Ukrainian basis for the formation of management models are laid down in the institutions of the state policy of Ukraine in the field of water supply and wastewater, which prove: 1) the deformation of the institute of property in the state and the problem of the formation of an effective owner in the communal sphere; 2) low-quality legal support for the functioning of the water supply and wastewater sector; 3) underdevelopment of the judicial system and its ineffectiveness (deformation of the rule of law principle); 4) ineffective financial and economic policy of the state; 5) ineffective administrative reform of the state, lack of succession in the state apparatus; 6) the formation of a distorted public ideology; 7) institutional failure of the authorities; 8) low level of social culture; 9) low activity or lack of public opinion, which enhances the role of the state in the field of water supply and wastewater; 10) politicization of tariff formation procedures and procedures; 11) orientation of the state policy to address the interests of influential business structures. It is easy to predict that the introduction of such a model in Ukraine will end with a simple substitution of the state monopoly for a private monopoly, with the invariability of the problems of the sphere, orientation of measures for the quick profit of business structures, rather than long-term modernization of the sphere.

It should be noted that the mentioned institutional problems of the water supply and wastewater system will remain characteristic for the sphere irrespective of changes in management and regulation models, as they are the basic problems of the state policy. The implementation of the German model of water supply and wastewater management (which has been considered the best governance model for the last 10 years) requires a strong position of local governments, which is typical of countries with a federal structure and relevant historical and cultural traditions and legal regulation (including the legal culture). Germany built its strong municipal system from the end of the 19th century, and adheres to it so far. Decentralization of local authorities reduces state influence on the sphere and is inseparable from the responsibility of local authorities for efficient management of communal property, for ensuring sustainable and safe water supply and wastewater. The effectiveness of decentralization depends on the local social and political context and state policy of the country, especially the existing institutions and the quality of governance [22]. The ten-year experience of tariff regulation of local governments in the field of water supply and wastewater in Ukraine showed the use of regulatory functions to meet their own political interests of local self-government bodies. And the implementation of the decentralization reform in Ukraine has not yet yielded adequate results. So, to speak today about the possibility of introduction in Ukraine of a model of corporate governance with regulatory functions of local self-government is too early. Perhaps, after some years of implementing the decentralization of power reform, local authorities will take an active and strong position in the water supply and wastewater sector, which will change the existing state policy.

The introduction of a more flexible French model of governance, under which some normative and legal acts on public-private partnership and concessionality features developed in Ukraine, are complicated (with the exception of the institutional problems of state policy), the lack of experienced national water supply management and wastewater management companies, minor legal practice and the lack of traditions of contractual (contractual) law, the weak position of local self-government bodies regarding effective management of communal services property and services of water supply and wastewater. The principles of operation and construction of the French management model derive from the thinking system, which is based on the analysis of various forms of state regulation of the economy and the consolidation of the legal norms of communal services, in which the state, involving private enterprises, is interested in the fact that works and services have been fulfilled, qualitatively [28, p. 39].

Thus, the question of the need for adaptation of European models of water supply and wastewater management and regulation in Ukraine should not be considered in the context of the connection of the private sector with the efficiency of the operation of the water supply and wastewater system, and in the context of a clear understanding of the purpose of the introduction of such management and regulation – meeting needs consumers in obtaining quality water supply and wastewater services. In our opinion, the current state policy of Ukraine in the field of water supply and wastewater should be based on that experience and those basic principles that are clearly understood in decades of building a market economy. This means that the fundamental change of ownership in the sphere of water supply and wastewater without changing the principles and resolving the institutional problems of state policy will not lead to effective changes, but it can worsen the existing state of affairs. Therefore, management models should be

based on the principle of unchanging communal ownership of water supply and wastewater enterprises (apart from new water supply and wastewater systems that can be built with the help of private investors) with the introduction and development of the legal culture of contract law. Accordingly, the model of regulation in the field of water supply and wastewater can be reviewed depending on the strengthening or weakening of the position of local governments and the state.

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